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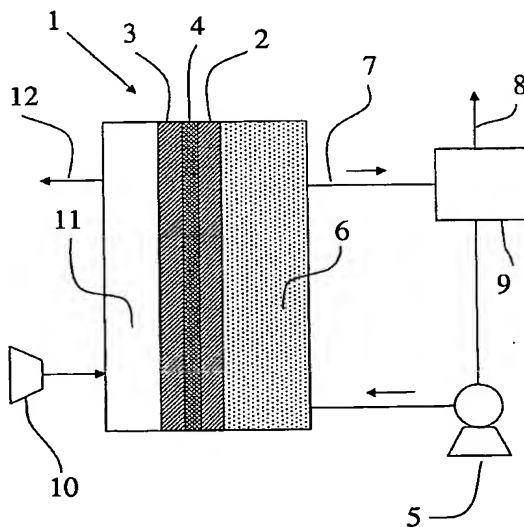
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(54) Title: FUEL CELL INCORPORATING A POLYMER ELECTROLYTE MEMBRANE GRAFTED BY IRRADIATION



(57) Abstract: Fuel cell comprising: (a) an anode; (b) a cathode; (c) a polymer electrolyte membrane placed between the anode and the cathode which comprises at least one polyolefin grafted with side chains containing proton conductive functional groups; wherein said fuel cell has: a value of cell resistance at 90 °C not higher than 0.30 $\Omega \text{ cm}^2$, preferably comprised between 0.2 $\Omega \text{ cm}^2$ and 0.25 $\Omega \text{ cm}^2$, more preferably comprised between 0.05 $\Omega \text{ cm}^2$ and 0.20 $\Omega \text{ cm}^2$; a value of cell resistance at 20 °C differing from the value of cell resistance at 90 °C of an amount not higher than 90%, preferably not higher than 70%, more preferably not higher than 50%, with respect to the value of cell resistance at 90 °C. Preferably, said fuel cell is a direct methanol fuel cell (DMFC).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01M8/10

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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 242 123 B1 (ITO NAOKI ET AL) 5 June 2001 (2001-06-05) claims 1-31	1-52
A	US 5 679 482 A (EHRENBERG SCOTT G ET AL) 21 October 1997 (1997-10-21) claims 1-25	1-52
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Patent family members are listed in annex.

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